

Cyphoderris monstrosa piperi, new variety.

Distinguished from the typical *monstrosa* by the average greater size, rougher and more opaque surface of the pronotum and by the color of the pronotum. In structure like *monstrosa* but different in general appearance. Pronotum more opaque and mesially more profoundly incised dorsolaterally, in the male the posterior lobe rising more rapidly posteriorly and the surface much more coarsely ridged longitudinally than in the typical *monstrosa* and the deep black of the anterior lobe is less glistening and is continued across the lateral lobes to the posterior border and thence along the hind border across the top, leaving only the center of the pronotum and the lower margin of the lateral lobes without infuscation.

Length, male, 27 mm., female, 31 mm.; pronotum, male, 8.5 mm., female, 7 mm.; posterior femora, male, 12 mm., female, 11 mm.; wings beyond pronotum, male, 8.5 mm., female, 1 mm.

Type. — No. 7723, U. S. National Museum.

The collector, in whose honor this interesting variety is named, furnishes the following note on the habitat of the insect:

“These specimens were collected in Paradise Valley on the south side of Mt. Rainier, Washington, at the point called ‘camp of the clouds,’ altitude about 6,000 feet. They were collected during the daytime hidden under débris in a grove of alpine fir. No memorandum was made concerning their notes.”

Class III, ARACHNIDA,**Order I, ACARINA,****FOUR NEW SPECIES OF INJURIOUS MITES.**

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(PLATE II.)

The following four new species of mites are all of considerable economic importance. They have been received by the U. S. Department of Agriculture, Division of Entomology during the past year. The manuscript names of some of them have already appeared in print, therefore it is useful to have the technical descriptions issued at an early date.

Genus TETRANYCHOIDES Banks, 1904.

In October, 1903, Mr. W. H. Volck, of Berkeley, Cal., sent me some pieces of orange leaves infested with a mite unknown to him. The mites were in colonies of two or three up to a dozen or more; usually in a slight depression of the leaf. Each colony was evident to the unaided eye as a snow-white patch; this appearance being due to the fact that the moulted skins are retained attached to the spot. The mites and their eggs are located amongst them. The mite rests with its legs extended and the beak placed against the surface of the leaf. The eggs are spherical and hyaline. Here and there on the leaf were threads like those of the "red-spider"; it is probable that these were made by the mites.

The mites at first glance looks very much like a *Tydeus* (Family Eupodidæ), but *Tydeus* is a predatory, solitary mite. The affinities are with the genus *Eupalopsis* Can., but it differs from this, as well as from all others of the family Tetranychidæ in having the last joint of the palpi attached to the tip of the preceding joint. On account of the appearance of a colony of these creatures, the mite may be commonly called, "the orange white spot."

Tetranychoides, new genus.

A Tetranychid, with moderately slender, tapering legs, each with two very short claws and a median pulvillus. Body transversely divided at anterior third; beak large, prominent. Palpus of five joints; the basal short, the next rather shorter, the third the largest, the fourth very short, the fifth about as long as the third, but not one half the diameter of the other joints, cylindrical, and tipped with a fine bristle. Legs in two groups; no eyes.

Tetranychoides californica, new species. (Plate II, Fig. 1.)

Pale yellowish, legs and palpi nearly hyaline. Body broadest at shoulders, tapering behind, rounded in front. Legs about three fourths as long as the body, palpi rather more than one half as long as leg I. The anterior tarsi show two long, erect bristles above; few other bristles on the legs. The body almost bare. Length 0.24 mm.

In colonies on under surface of orange leaves, Watsonville, Cal. (Volck).

Genus TENUIPALPUS Donn., 1877.

In August, 1903, Mr. S. A. Pease sent from Redlands, Cal., some bits of orange peel infested with a small pale mite. On examination these were found to belong to the genus *Tenuipalpus*, no species of which had been recorded from this country. The mites were quite numerous, and evidently do some damage, perhaps, however, not as

much as the "rust-mite." I have not seen the mites alive, so cannot say whether they live in colonies or not. The genus differs from other Tetranychidæ in the slender palpi, the furrows across base of abdomen and the short, thick legs. The species is described as follows:

***Tenuipalpus californicus*, new species.** (Plate II, Fig. 2.)

Body broad; broadest in front across cephalothorax, tapering behind, but broadly rounded at tip. The side-margins of the cephalothorax, and the base of abdomen is deeply crenulate. The abdomen shows several transverse furrows on the basal part. There is a hair on the outer side of the cephalothorax, and three each side near the tip of the abdomen. The legs are short, and their margins more or less crenulate. They have but few hairs, and these on the basal joints. The venter of the female shows two smooth areas in the posterior part surrounded by furrows; the first is one and one half times as broad as long, the other just behind it is semicircular. The male is much more slender, although but little longer than the female. The latter with eggs is rather longer and with a more tapering abdomen; the eggs are elongate and red in color.

Length 0.2 mm.

On orange peel, Redlands, Cal. (Pease). In one of the lots sent were several Gamasid mites, evidently predaceous upon the *Tenuipalpus*.

Genus *TARSONEMUS* Can., 1876.

In the greenhouses of the U. S. Department of Agriculture there have been a number of small mango plants. Some of these stopped growing when about 12 to 18 inches high. The tip of the shoot was thickened and partly discolored. Investigation showed that they were infested with a new species of *Tarsonemus*. The mites occur on the surface of the swelling in considerable numbers, and their feeding seems to cause a stoppage of growth, and enlargement of the affected part—a gall, although without cavity.

***Tarsonemus latus*, new species.** (Plate II, Fig. 3.)

Body (♀) broadly elliptical; beak short and broad. Legs I and II subequal, scarce half the length of body, with a few hairs toward tips; leg III longer than II, and more slender; leg IV still more slender and ending in two hairs, one much longer than the other. Body of male very broad, broader than long; beak conical. Leg I small; II larger; III longer than II, but more slender, IV very large and thick, the femur swollen on outside, a spinous process near tip of tibia on inner side, and a long hair from outside of tarsus near tip. Between the hind legs the abdomen ends in a broad, emarginate lobe, with a long bristle from each outer corner. Length 0.5 mm.

On young shoots of mango (in greenhouses) Washington, D. C.

Genus **ERIOPHYES** Sieb., 1850.

Sir David Morris, High Commissioner of Agriculture for the British West Indies, recently brought to the Division of Entomology some mite-galls on cotton from Montserrat. Mr. Ballou had preserved some of the mites on slides. Upon examining the material I find that the galls are caused by a mite, a species of *Eriophyes* which I propose to call *E. gossypii*. The cotton leaves were very heavily infested with the galls, so much so that many were a mass of roughened swellings, curled and distorted. Within the recesses of these galls the mites were found in abundance, together with many eggs. The damage to the cotton is so severe that a great deal of it was thrown into the sea. Mr. Ballou, in the "West Indian Bulletin," Vol. iv, p. 282, has given an account of the species. He recommends that the weeders working in the field be supplied with bags in which to put infested leaves, the bags, when filled, to be placed in boiling water.

Eriophyes gossypii, new species. (Plate II, Fig. 4.)

Body elongate, cylindrical, and tapering; about six times as long as broad; abdomen with about seventy rings; two pairs of bristles on lower sides, one at about middle of length, the other half way from this to tip. At the tip there is a truncate plate, from each outer corner of which arises a long curved bristle. Dorsum of cephalothorax subtriangular, the sides slightly undulate, and in front truncate; above with three irregular subparallel ridges each side, the inner one the longest. Legs short, the femora slightly thickened near base, a long bristle near tip of tarsus.

In galls on cotton leaves, island of Montserrat, West Indies.

EXPLANATION OF PLATE II.

Fig. 1. *Tetranychoides californica* Banks, *a*, mite, side view; *b*, palpus; *c*, tarsus I, and *d*, under side of beak.

Fig. 2. *Tenuipalpus californicus* Banks, *a*, ♂, *b*, ♀ from above; *c*, venter of ♀.

Fig. 3. *Tarsonemus latus* Banks, *a*, ♀, *b*, ♂ from below; *c*, affected mango shoot.

Fig. 4. *Eriophyes gossypii* Banks, *a*, mite; *b*, cephalothorax enlarged; *c*, section of gall.